

Application No. : 10/635,593
Filed : August 5, 2003

REMARKS

Claims 2, 3, 5, 6, and 8-34 were pending in the application. By this paper, Applicant has amended Claims 2, 3, 5, 6, 9-17, 21 and 25-34, and added new Claims 35-45. Accordingly,

5 Claims 2, 3, 5, 6 and 8-45 are presented for examination herein.

Request for Continued Examination (RCE)

Applicant submits concurrently herewith a request for continued examination of the present application.

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Allowed Claims

Per Page 6 of the Office Action, Claims 8, 19 and 20 stand allowed. Applicant thanks the Examiner for the allowance of these claims.

15 *§112 Rejections*

Claims 10, 11, 13, and 14 - The Examiner has rejected Claims 10, 11, 13 and 14 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner has asserted that the specification fails to describe a specific limitation found in these claims that the “*legacy request symbol comprises a priority*.” Applicant respectfully disagrees and traverses.

20 Support for the aforementioned claim language is found specifically at Page 22, Par. [0090], lines 5-7:

25 “*In a preferred embodiment of the present invention, the Legacy request is deemed to be a current request and will be given a higher priority than both asynchronous and isochronous requests.*” {emphasis added}

Thus, Applicant respectfully asserts that the claim is fully supported and described by the specification as filed. Hence, this rejection was improper, and should be withdrawn.

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Claims 15, 25 – The Examiner has also rejected Claims 15 and 25 under 35, U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner has asserted that the specification fails to teach the “*first serialized protocol*” and the

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“second serialized protocol” as recited in both of these claims. Applicant respectfully disagrees and traverses.

Support for the aforementioned claim language is replete throughout Applicant’s specification. The discussion of serialized protocols begins on Page 2, Par. [0003], line 7:

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“*Therefore, a need was apparent for a serial bus standard that would allow for the connection and communication between such devices.*” Further, on Page 2, Par. [0004], line 1: “*The IEEE 1394-1995 standard was developed to satisfy this need.*” {emphasis added}

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Support continues on Page 2, Par. [0005], line 1:

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“*[T]he need to update the IEEE 1394-1995 standard became apparent. Two new standards are being proposed at the time of the filing of this application, herein referred to as the proposed IEEE 1394a, or P1394a standard, and the proposed IEEE 1394b, or P1394b standard.*” {emphasis added}

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The need to distinguish between two serialized protocols (Legacy vs. 1394b) is generally discussed at the beginning of Applicant’s Page 3, Pars. [0007]-[0009]. Additionally, Fig. 5 and illustrates a hybrid network comprising a set of nodes governed by a first serialized protocol (the Legacy Cloud), interfacing with nodes governed by a second serialized protocol (the Beta Cloud).

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Applicant also submits to Examiner that a person of ordinary skill in the art would immediately recognize that the protocols as discussed in the specification (1394-1995, 1394a, 1394b) are all serialized protocols.

Hence, Applicant requests that these rejections be withdrawn.

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Claim 15 – The Examiner has also rejected Claim 15 under 35 U.S.C. §112 as failing to support four other limitations under the written description requirement. Applicant respectfully disagrees and traverses.

Support for a “*method for issuing an inactivity-related communication*” is specifically found, *inter alia*, on Page 23, Par. [0094], lines 1-7. Par. [0094] generally describes the method of having a border device generate gap tokens, i.e. an inactivity related communication.

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With respect to “*timing a period of idle bus activity in at least a portion of said hybrid bus operating according to said serialized protocol*” – this is specifically supported at *inter alia*, Page 23, Par. [0094], line 3:

5 “*the border devices will take over the responsibility of timing the IDLE duration.*” {emphasis added}

With respect to “*generating an inactivity-related communication corresponding to said period of idle bus activity*” – this is specifically supported at Page 23, Par. [0094], lines 4-8:

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“*This means that when a border device detects a duration which amounts to a subaction gap, the border will issue an Asynch start. Likewise, when the border device detects a duration amounting to an Arb reset gap, the border device will issue an Arb reset even/odd.*” {emphasis added}

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Finally, with respect to “transferring said gap-related communication to said one node,” Applicant has herein amended Claim 15 to remove this limitation.

Applicant respectfully asserts that the §112 rejections of Claim 15 were therefore improper, since the cited limitations are fully supported in the specification. Thus, Applicant 20 submits that Claim 15 as presently amended complies with the requirements of 35 U.S.C. §112, and requests that the rejections be withdrawn.

25 **Claims 2, 3, 25 and 30** – The Examiner has rejected Claims 2, 3, 25 and 30 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner asserts that the phrase “*said data structure adapted to be stored in a computer memory*” is unclear in that the phrase “adapted to” make the storages optional.

30 By this paper, Applicant has amended Claims 2, 3, 25, and 30 to remove each of these limitations. Applicant submits that amended Claims 2, 3, 25 and 30 comport with the requirements of 35 U.S.C. §112, second paragraph, and requests that this rejection be withdrawn.

35 **Claims 12-14** – The Examiner has rejected Claims 12-14 under 35 U.S.C. §112, second paragraph for indefiniteness. The Examiner asserts that there is an inconsistency in the claims

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12-14 referring to the “*machine readable data transmission*” recited in Claim 3, while the claims
12-14 instead recite a “*machine readable medium*.”

By this paper, Applicant has amended Claim 3 to read, *inter alia*: “*A computer readable storage medium comprising...*” Additionally, Claims 12-14 have been amended to be consistent
5 therewith.

Thus, Applicant submits that amended Claims 12-14 comport with 35 U.S.C. §112, second paragraph, and requests that this rejection be withdrawn.

10 **Claim 21** – The Examiner has rejected Claim 21 as lacking a clear antecedent basis. The Examiner asserts that “said device” is unclear. By this paper, Applicant has amended Claim 21 to refer to “*a device*”, thereby overcoming the Examiner’s rejection.

§101 Rejections

15 **Claims 2, 9, 10 and 11** – The Examiner has rejected Claims 2 and Claims 9-11 under 35 U.S.C. §101 as being directed to non-statutory matter. The Examiner has suggested replacing instances of “*a machine readable medium*” with “*a computer readable storage medium*,” and instances of a “*data structure*” with either “*software*,” “*a computer program*,” or “*computer executable instructions*.”

20 Applicant has herein amended the foregoing claims to replace instances of “*machine readable medium*” found in Claims 2, 9, 10 and 11 with “*computer readable storage medium*” per the Examiner’s suggestions.

Applicant has also replaced all instances of “*data structure*” as found in these claims with simply “*data*”. Applicant believes that amended Claims 2, 9, 10, and 11 overcome the Examiner’s rejections, and are in condition for allowance.

25 **Claims 3, 12, 13, 14** – The Examiner has also rejected Claims 3 and 12-14 as being directed to non-statutory subject matter. Applicant has herein amended these claims to replace all instances of “*machine readable data transmission*” instead with “*computer readable storage medium*” per the Examiner’s suggestions.

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Similarly, Applicant has also replaced all instances of “*data structure*” as found in these claims with “*data*”. Applicant believes that amended Claims 3, 12, 13 and 14 overcome the Examiner’s rejections, and are in condition for allowance.

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Claims 25-34 – Similarly, the Examiner has rejected Claims 25-34 as being directed to non-statutory subject matter. Applicant has herein amended these claims to replace all instances of “*machine readable data transmission*” instead with “*computer readable storage medium*” per the Examiner’s suggestions.

10 Additionally, Applicant has replaced all instances of “*data structure*” as found in these claims with “*data*”. Applicant believes that amended Claims 25-34 overcome the Examiner’s rejections, and are in condition for allowance.

§102 Rejections

15 **Claims 5, 6** - The Examiner has rejected Claims 5 and 6 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,519,657 (Stone et al., hereinafter, “Stone”). The Examiner asserts that despite Applicant’s reasoning, the claims as recited do not clearly distinguish from the teaching of Stone.

20 By this paper, Applicant has amended Claims 5 and 6 to include limitations relating to a plurality of border nodes and a non-border node within a beta cloud, and the recited non-border node not comprising a gap timer.

25 **One of Applicant’s objectives with the inventions of Claims 5 and 6 was to free non-border nodes from the requirement of having their own gap timers** (see page 23-24 of Applicant’s specification as filed). Stone in no way teaches or suggests this feature. In fact, Stone explicitly states that according to his invention: “[a]ll 1394b devices must have a gap timer and must correctly respond to PHY configuration packets which set that timer,” (Col. 9, lines 54-56) (emphasis added). Therefore, Stone does not teach or suggest a non-border node within a beta cloud that does not comprise a gap timer, as specifically claimed by Applicant.

30 Applicant believes that the aforementioned amendments to Claims 5 and 6 now clearly distinguish Applicant’s claims from the teaching of Stone. As such, Claim 5 and Claim 6 distinguish over the art of record, and are in condition for allowance.

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§103 Rejections

The Examiner has rejected Claims 2, 3, and 9-14 under 35 U.S.C. 103(a) as being unpatentable over Stone (U.S. Patent No. 6,519,657). The Examiner asserts that since Stone 5 teaches the concept of packet modification at a border node in order to indicate the presence of a legacy node to B nodes, it would have thus been obvious for one of ordinary skill in the art to apply such modifications so as to handle arbitration requests. Applicant respectfully disagrees and traverses.

At the outset, it should be noted that self-identification is a process that is wholly separate 10 from the exemplary embodiment's (1394) arbitration. Self-identification in this context involves a node broadcasting its node number to other nodes following a bus reset. Arbitration in this context concerns a node attempting to gain the right to use the bus so that it may transmit data.

According to Stone:

15 “*During the self-ID process at bus reset, the border node 250 transmits a self-identification (self-ID) packet to the directly adjacent 1394b node or nodes. This self-ID packet contains information indicating that it is from a border node 250 having a least one active connection to a 1394a node...Upon receiving one or more border node 250 self-ID packets, all 1394b nodes in the B network 270 change their rules of operation to comply with hybrid fabric rules, which this application defines,*” Col. 4, lines 62-67 – Col. 5, lines 7-10 {emphasis added}

Thus, Stone teaches packet modification during the self-ID process so as to indicate to 1394b the nodes that there is at least one 1394a node connected to a border node (see Col. 2, lines 34-38).

25 Upon learning this, “*the 1394b nodes of the network of 1394 compliant devices alter their behavior for arbitration purposes*” (Col. 2, lines 38-41).

By contrast, Applicant teaches in independent Claims 2 and 3, *inter alia*: “data for arbitrating on a high performance serial bus.” Unlike Stone's above disclosure, which generally concerns setting a symbol in a packet during the Self-id process in order to indicate to other 30 nodes in the network the existence of a 1394a node, Applicant's disclosure relates to a border node generating a symbol comprising an indication that a node within the Legacy cloud wishes to arbitrate. Thus, the packet modification as discussed in Stone is for a completely different purpose.

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Furthermore, Stone's disclosed method of arbitration is readily distinguishable from Applicant's. According to Stone's system, when a 1394a node wishes to arbitrate, "*it issues its request signal as per the 1394a standard.*" (Col. 9, lines 7-8). "*The border node then broadcasts that request into the 1394b network*" (Col. 9, lines 11-12). At no point during this transmission 5 does the border node generate a symbol indicating that a device, PHY, link or link layer from the Legacy cloud wishes to arbitrate within a beta cloud. Put differently, the border node discussed in Stone merely passes the generic 1394a arbitration request into the beta cloud without any modification.

The Examiner seems to be suggesting, however, that it would have been obvious for one 10 of ordinary skill in the art to take the "concept" of packet modification out of Stone's discussion concerning the Self-ID process and simply apply that into the context of arbitration requests. Stone, however, neither teaches nor suggests a *motivation* for combining the elements in this manner (See MPEP 2403.01, "*The prior art must suggest the desirability of the claimed invention.*") The Examiner has thus not met his *prima facie* burden.

15 In fact, since Stone has dismissed the use of "special signals" to communicate the existence of a hybrid bus to other nodes as being "cumbersome" and "inefficient" (Col. 2, lines 12-14), an inference may be drawn that Stone would be equally dismissive of "a symbol generated by a border node" in order to indicate that a Legacy node wishes to arbitrate in the beta cloud. As mentioned earlier, Stone's arbitration mechanism does *not* utilize such a symbol, 20 which appears to be consistent with Stone's aforementioned statement. Hence, Stone's statement appears to *teach away* from Applicant's invention.

For each of these reasons, Applicant believes that the rejection of Claim 2 and Claim 3 was improper. These rejections should therefore be withdrawn.

Note also that since Claims 9-14 are dependent upon Claims 2 and 3, these claims are 25 also in condition for allowance.

Other Amendments:

Claim 5 as previously presented recited "*border node*" in the preamble, but subsequently referred to "*border device*." Claim 5 has been amended herein to correct this deficiency.

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Claims 5 and 6 recited “*a plurality of border nodes*.” These instances herein have been replaced with “*one or more border nodes*.” Support for these amendments is replete throughout Applicant’s specification, and no new matter has been added.

Claim 15 was amended to correct a syntax error located in the preamble. Claim 15 has 5 also been amended in various locations to more clearly distinguish Applicant’s invention from the prior art. Support for this amendment is replete throughout Applicant’s specification, and can be found, *inter alia*, at page 23, paragraphs [0093] and [0094].

Additionally, dependent Claims 16 and 17 have been amended to be consistent with the new language appearing in amended Claim 15. Again, no new matter has been added by way of 10 any of these amendments.

New Claims

By this paper, Applicant has added new Claims 35-42. Support for these claims is replete throughout Applicant’s specification. No new matter has been added by way of these claims.

15 Applicant submits that new independent Claim 35 is allowable in that, *inter alia*, the prior art does not teach or suggest (i) determining, using only a border node, a period of idle bus activity in at least a portion of a hybrid bus operating according to a first serial bus protocol; and (ii) generating via the border node an inactivity-related communication corresponding to the period of idle bus activity.

20 New independent Claim 42 corresponds generally to the subject matter of allowed Claim 20, and hence is believed to be both novel and non-obvious over the art of record.

Other Remarks

25 Applicant hereby specifically reserves all rights of appeal (including those under the Pre-Appeal Pilot Program), as well as the right to prosecute claims of different scope in another continuation or divisional application.

30 Applicant notes that any claim cancellations or additions made herein are made solely for the purposes of more clearly and particularly describing and claiming the invention, and not for purposes of overcoming art or for patentability. The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicant’s position with respect to any

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claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such cancellations or additions.

Furthermore, any remarks made with respect to a given claim or claims are limited solely to such claim or claims.

5 If the Examiner has any questions or comments which may be resolved over the telephone, he is requested to call the undersigned at (858) 675-1670.

Respectfully submitted,

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GAZDZINSKI & ASSOCIATES

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